

REMARKS

Responsive to the aforementioned office letters of November 20, 1999 and April 3, 2000, the U.S. Patent and Trademark Office is respectfully requested to not enter the applicant's previous
5 Amendment A filed on November 29, 1999, and substitute this new Amendment A therefor as being fully responsive to the office action of November 20, 1999, and the office action of April 3, 2000.

Because of the large number of claims in the application and to eliminate any confusion, the applicant has identified the origin
10 and status of each of the claims as follows:

	<u>Former Claim</u>	<u>Present Claim</u>	<u>Status</u>
15	1-8	1-8	Allowed
	9	9	Rejected and amended to define over Credle, Jr.
20	10	10	Dependent upon Claim 9 and amended to define over Credle, Jr.
25	10	41	It was indicated that Claim 10 would be allowable if rewritten in independent form and, thus, Claim 10 has been presented herein as new Claim 41. The original Claim 10 has been retained, since it depends on Claim 9 which has further been amended and thus differs from Claim 41.
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40	11	11	This claim has been resubmitted, since the base Claims 9 and 10 have been amended to define over Credle, Jr.

	<u>Former Claim</u>	<u>Present Claim</u>	<u>Status</u>
5	11	42	It was indicated that Claim 11 would be allowable if rewritten in independent form and, thus, Claim 10 has been presented herein as new Claim 42. The original Claim 10 has been retained, since it depends on Claim 9 which has further been amended and, thus, differs from Claim 42.
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20	12	12	This claim was rejected but depends from Claim 9 which has been amended to define over Credle, Jr. At present, Claims 9 and 12 stand rejected, but are now believed to be allowable.
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30	13	13	This claim has been resubmitted since it effectively depends from Claim 9, which has been amended to define over Credle, Jr.
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40	14	14	This claim was rejected over Credle, Jr. and has been amended to define over Credle, Jr.
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50	15	15	This claim has been resubmitted since it effectively depends from Claim 9, which has been amended to define over Credle, Jr.
	16	16	This claim has been resubmitted since it effectively depends from Claim 9, which has been amended to define over Credle, Jr.

	<u>Former Claim</u>	<u>Present Claim</u>	<u>Status</u>
5	17	17	This claim has been resubmitted since it effectively depends from Claim 9, which has been
10			amended to define over Credle, Jr.
15	18	18	This claim depends from Claim 9 which has been amended to define over Credle, Jr. At present, Claims 9 and 12 stand rejected, but are now believed to be allowable.
20	19-26	19-26	Stand allowed.
25	27	45	It was indicated that Claims 27-30 would be allowable if rewritten to overcome any rejection under 35 U.S.C. 112. Claim 27 has been cancelled and presented herein as new Claim 45.
30	28	46	It was indicated that Claims 27-30 would be allowable if rewritten to overcome any rejection under 35 U.S.C. 112. Claim 28 has been cancelled and presented herein as new Claim 46.
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40	29	47	It was indicated that Claims 27-30 would be allowable if rewritten to overcome any rejection under 35 U.S.C. 112. Claim 29 has been cancelled and presented herein as new Claim 47.
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50	30	48	It was indicated that Claims 27-30 would be allowable if rewritten to overcome any rejection

	<u>Former Claim</u>	<u>Present Claim</u>	<u>Status</u>
5			under 35 U.S.C. 112. Claim 30 has been cancelled and presented herein as new Claim 48.
10	31	31	Allowed.
	32	32	Allowed.
15	33	33	Rejected and amended to distinguish over Credle, Jr.
20	34	43	It was indicated that Claim 35 would be allowed if amended to overcome objections under 35 U.S.C. 112. This Claim 34 has been presented as new Claim 43 and is believed to be allowable, although Claim 34 in its original form still remains dependent upon Claim 33 and thus differs from this new Claim 43.
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30	35	35	Dependent from Claim 33 which has been amended to distinguish over Credle, Jr.
35	35	44	It was indicated that Claim 35 would be allowable if amended to overcome objections under 35 U.S.C. 112. This Claim 35 has been presented as new Claim 44 and is therefore believed to be allowable. The original Claim 35 still remains dependent upon Claim 33 and, since Claim 33 was amended, Claim 44 differs therefrom.
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50	36	36	Dependent upon Claim 33 which has been amended to

	<u>Former Claim</u>	<u>Present Claim</u>	<u>Status</u>
5			distinguish over Credle, Jr. and is now believed to be allowable.
10	37	37	Dependent upon Claim 33 which has been amended to distinguish over Credle, Jr. and is now believed to be allowable.
15	38	38	Dependent upon Claim 33 which has been amended to distinguish over Credle, Jr. and is now believed to be allowable.
20	39	39	Resubmitted since it is dependent upon Claim 33 which has been amended to distinguish over Credle, Jr.
25		41	Equivalent subject matter of Claim 10 presented in independent format.
30		42	Equivalent subject matter of Claim 11 presented in independent format.
35		43	Subject matter of Claim 34 presented in independent format.
40		44	Subject matter of Claim 35 presented in independent format.
45		45	Subject matter similar to Claim 25 (Claim 25 has been amended and is pending), but which has further been drafted to call for the various fluid flow channel valves connected to the various passageways and operable by the pressure therein
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	Former	Present	

<u>Claim</u>	<u>Claim</u>	<u>Status</u>
5		as well as the second flow channel and second fluid flow control valve.
10	46	Essentially Claim 28 in independent format and which has been cancelled.
15	47	Essentially former Claim 29 which has now been cancelled.
20	48	Essentially former Claim 30 which has now been cancelled.
25	49	New claim patterned along the lines of Claim 9, but specifically call for the soda drive piston chamber being aligned with but spaced apart from the syrup drive piston chamber.
30	50	New claim patterned along the lines of Claim 10, but specifically call for the soda drive piston chamber being aligned with but spaced apart from the syrup drive piston chamber.
35	51	New claim dependent upon Claim 49 but reciting the control piston chamber with a floating piston therein not biased to either end position when in the off state.
40	52	New independent claim based along the lines of Claim 33, but including the same limitations which were also added to Claim 49.
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	<u>Former Claim</u>	<u>Present Claim</u>	<u>Status</u>
5		53	New claim dependent upon Claim 52.
10		54	New independent claim based on similar subject matter to Claim 9, but now recites that the piston control has end positions and that piston is actually a floating position not biased to either of the end positions when in the off state.
15		55	New independent claim contains subject matter similar to that in Claim 39, but includes the same limitations added to Claim 54.
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25 With respect to the substance of the office action of November
 20, 1999, applicant notes with appreciation the allowance of Claims
 1-8, 19-26 and 31 and 32. At the outset, it is noted that in the
 office action dated April 3, 2000, the Examiner indicated that the
 30 reply filed on November 29, 1999 (applicant's Amendment A), was not
 fully responsive to the prior office action. In a brief telephone
 communication with the new Examiner now handling the present
 application, it was indicated that the applicant should resubmit
 the Amendment A, but delete from the amendment the claims which
 35 have been resubmitted or which have been held allowed and not
 retype same in this draft of the amendment. The applicant has
 therefore eliminated the retyping of the allowed claims and
 resubmitted claims and it is believed, in large measure, this
 should eliminate any confusion which may have arisen.

In the aforementioned office letter of November 20, 1999, it was indicated that Claims 10, 11, 34 and 35 were only objected to as being dependent upon a rejected base claim. Claim 10 has been presented herein as new Claim 41 and Claim 11 has been presented as new Claim 42. Claim 34 has been presented herein as new Claim 43 and Claim 35 has been presented herein as new Claim 44. It is therefore believed that Claims 41 through 44 are also allowable.

On page 3 of the office action, the Examiner also courteously indicated that Claims 27-30 would also be allowable if amended to overcome any rejection under 35 U.S.C. 112 and are presented in independent format. The applicant has added new Claim 45, which is based along Claim 25 and which has been corrected to recite the first fluid control. Consequently, there is sufficient antecedent basis for the subsequently claimed second fluid control. In addition, the applicant has also added new Claims 46-48 which correspond respectively to Claims 28, 29 and 30. It is therefore believed that new Claims 45-48 are also in allowable condition and allowance therefor is respectfully solicited.

Those claims which were rejected under 35 U.S.C. 112 have been amended in order to obviate any informalities noted by the Examiner. It is believed that these claims are free of any objection under 35 U.S.C. 112. The applicant has also similarly amended a few of the other claims in order to avoid any informalities or inaccuracies previously noted by the applicant. With respect to amendments to the allowed claims, it is to be noted

that these amendments are only matters of form and do not change the substance of the claims.

The remaining claims, including Claims 9, 12-18, 33 and 36-40 were all rejected as being anticipated by the Credle, Jr. patent.

5 Reconsideration of this rejection is respectfully urged.

In view of the large of number of claims presented in the application, the applicant believes that the following chart may be helpful to the U.S. Patent and Trademark Office in understanding the status of each of the claims present in this application. This
10 is believed to be particularly helpful in view of the fact that the applicant is not presenting each of the claims in their full form in this draft of the amendment.

At the very outset, the applicant is quite familiar with the structure shown in the Credle, Jr. patent. The applicant is also
15 aware that the Credle, Jr. patent was apparently not approved by the FDA of the United States due to the fact that there was no effective sealing between the soda chamber and the syrup chamber. Indeed, it is for this reason that the Coca Cola Company, assignee of the Credle, Jr. patent, sought an additional mixing valve.

20 Notwithstanding the problems with the Credle, Jr. patent, it is also to be noted that the applicant utilizes an entirely different system than that proposed by Credle, Jr. The entire system taught and claimed by the applicant is a liquid operated system and is operated solely from the liquid and syrup which is
25 introduced through the soda and syrup inlets. Credle, Jr., on the other hand, uses a popit valve control mechanism. In fact, Credle,

Jr. must use no less than three popit valves. Moreover, these popit valves are electrically operated and which inherently introduces another safety problem into the system of Credle, Jr. The applicant's device, on the other hand, presents a far superior system.

Claim 9 of the application has been amended to recite that the control piston is completely liquid driven. Moreover, Claim 9 recites that the control piston is powered through soda from the soda inlet. This is totally unlike anything in Credle, Jr. which relies upon popit valves to control the syrup section and the soda section. Consequently, it is believed that Claim 9, as amended, patentably distinguishes over Credle, Jr. or any of the other references of record. Claims 10-18 are all dependent upon Claim 9 and are therefore believed to be allowable for the reasons advanced regarding the allowance of Claim 9.

Claim 33 has also been amended along the lines of Claim 9. In effect, the last subclause of Claim 33 now corresponds almost identically to the last subclause of Claim 9. For the same reasons, it is believed that Claim 33, and Claims 34-40 dependent thereon, are also believed to be allowable and allowance therefor is respectfully solicited.

The applicant has also added new Claims 49 and 50 patterned respectively along the lines of Claims 9 and 10. These claims more specifically call for the soda drive piston chamber being generally aligned with but spaced apart from the syrup drive piston chamber, such that there is an air gap between the two chambers. The claims

recite that this precludes the possibility of soda entering the syrup drive piston chamber or syrup entering the soda drive piston chamber. This is one of the problems that was present in the Credle, Jr. patent. It can be observed from Credle, Jr. that the two chambers are abutted against one another, although they are separate chambers. The problem is that Credle, Jr. relies upon the annular seals as a means to theoretically keep syrup from the soda chamber and soda from the syrup chamber. This has been found to be absolutely ineffective. Indeed, it has been found that the air gap between the two chambers is absolutely essential.

It has been realized that when the soda is mixed with the syrup a very harmful bacterial culture starts growing in the mixture and is a potential health hazard to anyone who might drink even a small quantity of this mixture. It is for this reason that the dispensing valve taught in the Credle, Jr. patent is not effective as a mixing valve. The applicant's invention, on the other hand, provides the air gap therebetween and allows for effective operation which is not available with Credle, Jr. It is therefore believed that Claim 49 and the claims dependent thereon are also allowable.

Claim 52 is also based upon Claim 33 and has been amended to include the same limitations which were included in Claim 49. It is therefore believed that Claim 52 and the dependent Claim 53 therefore also contain allowable subject matter.

Claim 54 is again based on the subject matter of Claim 9. This particular claim now recites that the piston control has end

positions and that the piston is actually a floating piston so that it is not biased to either of the end positions when in the off state. In contrast, it is to be noted that in Credle, Jr., and particularly in popit valves, a piston is always biased to one end when in the off position. Thus, it is again urged that Claim 54 therefore patentably distinguishes over the art of record. New Claim 55 is based on the subject matter of Claim 33, but also includes the limitations added to Claim 54. It is therefore believed that new claim 55 is similarly allowable. The applicant has finally has added Claim 51 which essentially incorporates the subject matter of Claim 9, as now amended, as well as new Claim 49 and new Claim 54. Therefore, for the reasons advanced regarding the allowance of each of these claims, it is believed that all of these new claims are now in allowable condition and allowance therefor is respectfully solicited.

In view of the foregoing, favorable reconsideration and allowance is respectfully solicited.

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Respectfully submitted,



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